

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Seok-Hyun Yun

Inventor:

Appln. No.:

10/577,562

Filed:

April 27, 2006

Title:

METHOD AND APPARATUS FOR PERFORMING

OPTICAL IMAGING USING FREQUENCY-DOMAIN

INTERFEROMETRY

Examiner:

To be

Group Art

assigned 2859

Unit:

REOUEST FOR CORRECTION OF FILING RECEIPT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

I hereby certify that this document is being deposited with the United States Postal Service addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 8th day of August 2006.

(Signature)

Sir:

Applicant hereby requests correction in the Filing Receipt. The inventor's last name was not included. In particular, the name of the inventor's last name should be identified as BRETT EUGENE BOUMA and not "BRETT EUGENE". In addition, under the Foreign Application category, nothing should be listed, and Domestic Priority data category should be the application number as "60/514,769" (incorrectly provided in the "Foreign Application" category) not 60514789.

Enclosed herewith is the executed declaration and the first page of International Publication No. WO 2005/047813. Also enclosed is the marked-up filing receipt.

Please forward a corrected filing receipt to reflect the last name of the inventor and the correct priority application number to the undersigned as soon as possible.

Respectfully submitted,

Date: August 8, 2006

By:

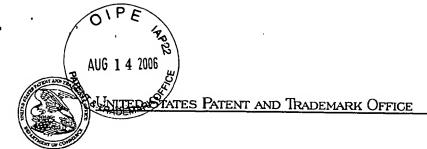
Gary Abelev (Reg. No. 40,479) DORSEY & WHITNEY LLP

250 Park Avenue New York, NY 10177

(212) 415-9200

Enclosures

4827-7678-3361\1



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandra, Virginia 22313-1450 www.uspto.gov

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY.DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/577,562	04/27/2006	2859	6850	036179US247538700030	20	95	14

CONFIRMATION NO. 3634

30873 DORSEY & WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT 250 PARK AVENUE NEW YORK, NY 10177

Patent Mail Received

AUG 04 2006

FILING RECEIPT

OC000000019752681

Date Mailed: 07/28/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Seok-Hyun Yun, Cambridge, MA;

Brett Eugene, Quincy, MA;

Guillermo J. Tearney, Cambridge, MA;

Johannes Fitzgerald De Boer, Somerville, MA;

Power of Attorney: The patent practitioners associated with Customer Number 30873.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/US04/29148 09/08/2004

Foreign Applications

UNITED STATES OF AMERICA 60514789 10/27/2003

If Required, Foreign Filing License Granted: 07/25/2006

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US10/577,562

Projected Publication Date: 11/02/2006

Non-Publication Request: No

Early Publication Request: No

Title

Method and apparatus for performing optical imaging using frequency-domain interferometry

Preliminary Class

033

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process simplifies the filing of patent applications on the same invention in member countries, but does not result in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER Title 35, United States Code, Section 184 Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 26 May 2005 (26.05.2005)

(10) International Publication Number WO 2005/047813 A1

(51) International Patent Classification7: A61B 5/00

G01B 9/02,

(21) International Application Number:

PCT/US2004/029148

(22) International Filing Date:

8 September 2004 (08.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/514,769

27 October 2003 (27.10.2003)

(71) Applicant (for all designated States except US): THE GENERAL HOSPITAL CORPORATION [US/US]; 55 Fruit Street, Boston, MA 02114 (US).

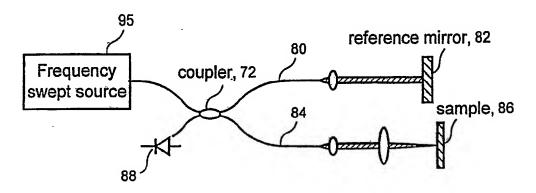
(72) Inventors; and

(75) Inventors/Applicants (for US only): YUN, Seok, Hyun, Ph., D. [KR/US]; 30 Cambrige Park Drive, Apt. 4128, Cambridge, MA 02140 (US). BOUMA, Brett, Eugene, Ph., D. [US/US]; 12 Monmouth Street, Quincy, MA 02171 (US). TEARNEY, Guillermo, J., MD, Ph., D. [US/US]; 12 Fairmont Street, Cambridge, MA 02139 (US). BOER, Johannes, Fitzgerald de, Ph., D. [NL/US]; 60 C Marshall Street, Somerville, MA 02145 (US).

- (74) Agent: ABELEV, Gary; Dorsey & Whitney, LLP, 250 Park Avenue, New York, NY 10177 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR PERFORMING OPTICAL IMAGING USING FREQUENCY-DOMAIN INTER-**FEROMETRY**



(57) Abstract: An apparatus and method are provided. In particular, at least one first electro-magnetic radiation may be provided to a sample and at least one second electro-magnetic radiation can be provided to a non-reflective reference. A frequency of the first and/or second radiations varies over time. An interference is detected between at least one third radiation associated with the first radiation and at least one fourth radiation associated with the second radiation. Alternatively, the first electro-magnetic radiation and/or second electro-magnetic radiation have a spectrum which changes over time. The spectrum may contain multiple frequencies at a particular time. In addition, it is possible to detect the interference signal between the third radiation and the fourth radiation in a first polarization state. Further, it may be preferable to detect a further interference signal between the third and fourth radiations in a second polarization state which is different from the first polarization state. The first and/or second electro-magnetic radiations may have a spectrum whose mean frequency changes substantially continuously over time at a tuning speed that is greater than 100 Tera Hertz per millisecond.